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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/971,949	10/05/2001	Joseph H. End III	TN205	4081

7590 09/13/2004

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EXAMINER

NGO, CHUONG D

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 09/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/971,949

Applicant(s)

END, JOSEPH H.

Examiner

Chuong D Ngo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/05/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 12-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 12-14 merely recite a method for performing an arithmetic division operation to compute a remainder from a dividend and the divisor according to a mathematical algorithm. The claims fail to recited any step that requires a specific device to implement the method, and thus are directed to non statutory subject matter.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tate et al. (3,733,477).

Tate et al. discloses in figure 1 a circuit for calculating and outputting a modulo value (the final partial remainder) including a plurality of subtraction circuits (24,26,28) for

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subtracting a common dividend signal (22) from test values signals (50,52,54,56,58,60,62) each representing a respective integer multiple of the divisor to produce remainder signals (66,68,70), a logic (158,160,162, see figure 3) for determining which of the remainder signals represents a true remainder, and a multiplexer (150,152,154,156, figure 3) for outputting the true remainder as claimed.

As per claims 8 and 13, the recitation that the dividend has a value ranging from 0 to 65535, and the divisor comprise a fixed value of 9973 is merely an intended field of use, the circuit of Tate et al is clearly capable of operating on these values.

As per claims 10 and 11, the subtract circuits as in figure 1 clearly receiving the test value signals before or substantially simultaneously with the dividend signal as the test value signals passing through two registers and a logic gate while the dividend passing through three registers

5. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yoshida (5,638,314).

Yoshida discloses in figure 1 a circuit for calculating and outputting a modulo value (the final partial remainder) including a plurality of subtraction circuits (3) for subtracting a common dividend signal from test values signals (outputs from 4) each representing a respective integer multiple of the divisor to produce remainder signals, a logic (8) for determining which of the remainder signals represents a true remainder, and a multiplexer (7) for outputting the true remainder as claimed.

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As per claims 8,10,11 and 13, the recitation that the dividend has a value ranging from 0 to 65535, and the divisor comprise a fixed value of 9973 is merely an intended field of used, the circuit of Yoshida is clearly capable of operating on these values. In addition, as the circuit is set with a constants divisor, the subtract circuits 1 clearly receiving the test value signals before or substantially simultaneously with the dividend signal.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong D Ngo whose telephone number is (703) 305-9764. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 309-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Chuong D Ngo', with a stylized, cursive script.

Chuong D Ngo
Primary Examiner
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09/005/2004